

DC-8 Diagnostic Ultrasound System

Performance Specifications

System Overview

Application

Abdomen
Obstetrics
Gynecology
Cardiology
Small parts
Urology
Vascular
Pediatrics
Emergency Medicine
Anesthesia
Others

Transducer types

Curved array transducer
Linear array transducer
Phased array transducer
4D Volume transducer

Imaging modes

B-Mode
Tissue Harmonic and PSH (Phase Shift Harmonic Imaging)
M-Mode/Color M-mode
Free Xros M (Anatomical M-mode)
Free Xros CM (Curved Anatomical M-mode)
Color Doppler Imaging
Power Doppler Imaging/Directional PDI
Pulsed Wave Doppler
Continuous Wave Doppler
TDI
Smart 3D (Freehand 3D)
4D
iScape View (Panoramic Imaging)

Standard features

B-Mode
THI and PSH
M-Mode
Color Doppler Imaging
Power Doppler Imaging and Directional PDI
Pulsed Wave Doppler
iBeam (Spatial Compounding Imaging)
iClear (Speckle Suppression Imaging)
iTouch (Auto Optimization)
Zoom/iZoom (Full Screen Zoom)
FCI (Frequency Compounding Imaging)
B steer
ExFOV
HR Flow (High Resolution Flow)
Raw data processing
4 active probe ports
1TB hard drive
DVD R/W driver
6-USB

Optional features

Continuous Wave Doppler
Free Xros M
Free Xros CM
iScape View

Smart 3D
4D
IMT
TDI (Include TVI, TVD, TVM, TEI)
TDI QA (TDI Quantitative Analysis)
DICOM
Clinical Measurement Package
Smart OB (Auto OB measurement)
iWorks (Auto Workflow Protocol)
iNeedle (Needle Visualization Enhancement)

Physical Specification

Dimension and weight

Height: 1355 – 1780mm
Width: 585mm
Depth: 930mm
Weight: Approx. 111kg (no peripherals)

Monitor

19-inch high resolution color LCD monitor
Resolution: 1680 × 1050
Digital on-screen display of brightness and contrast controls
Auto-calibrate brightness after system boot-up each time

Audio speakers

Stereo audio speakers

Multi-directional articulating monitor arm for better user-friendly experience

Rotate: ±90 degrees (from center)
Up: 280mm
Pull: 550mm

Wheels

Diameter: 125mm
Front castor (2 ea): Total lock and break
Rear castor (2 ea): One for total lock and break; the other one for direction lock and break

Probe port and holder

Probe ports: 4 active ports, plus 1 pencil probe port
Probe holder: 5 (one for pencil probe), plus 1 dedicated endocavity probe holder

Electrical power

Voltage: 100 – 127V~, or 220 – 240V~
Frequency: 50/60 Hz
Power consumption: Max. 800 VA
Circuit breaker: 250V~, 13A

Operating Environment

Ambient temperature: 0 – 40 °C
Relative humidity: 30% – 85% (no condensation)
Atmospheric pressure: 700hPa – 1060hPa

Storage & Transportation Environment

Ambient temperature: -20 – 55 °C
Relative humidity: 30% – 95% (no condensation)
Atmospheric pressure: 700hPa – 1060hPa



User Interface

Control panel

User-centric control panel with home-based and kidney-shaped layout favors easy access to keys
Backlit keys ensure accurate work in the dark room
Programmable keys available for user-defined functions
8-segment TGC control
Full-sized, backlit QWERTY keyboard for text input, function keys and system programming
Adjustable key volume and trackball speed meet different needs
Dedicated palm rest design to help reduce user repetitive stress injury
Independent rotation and up/down of control panel facilitates optimal positioning
Rotate: ±90 degrees (from center)
Down/up: 780 – 970mm (190mm range)

Touch screen

10.4-inch high sensitivity anti-glare color touch screen
Resolution: 1024 x 768
Digital brightness and contrast adjustment through preset
Viewing angle: ≥170 degrees
Support either hand writing or with gloves on

System boot-up

Boot-up from complete shut-down in less than 52 sec
Boot-up from standby mode in less than 13 sec
Shut-down in less than 33 sec

Comments

Supports text input and arrow
Voice annotation: Record voice as annotation for images and cine
Adjustable text size and arrow size
Supports home position
Covers various application
User customizable

Bodymark

More than 140 bodymarks for versatile application
User customizable

Performance Specifications

User Interface (cont'd)

Screen information*

Common info:

Mindray logo
 Hospital name,
 Exam date
 Exam time
 Acoustic output indices
 Freeze icon
 Gender, Age, ID, Last name, First Name,
 Middle initial
 Probe model
 ECG icon (when ECG connected)
 Operator
 Mechanical index
 TGC Curve
 Focus position
 Thumbnail
 Imaging parameters
 Help guidance
 Dynamic Trackball indices

*Not all items are listed in this part, detail info please refer to user manual

Imaging Parameters

Overview

Digital Multi-stage beamformer

B-mode

Display formats: Single(B), Dual(B+B), Quad(4B)
 iClear
 iBeam
 iTouch
 FCI: Frequency compounded imaging
 Dual Live: Side by side live display
 Image quality: Pen/Gen/Res (depend on probe)
 B steer: Available on linear transducers
 ExFOV: Extended FOV available on convex, linear, and volume transducers

Depth
 Frame rate
 Acoustic output power
 TGC
 LGC
 Dynamic range
 Gain
 Focus number
 Focus position: Adjustable
 FOV: Consistently adjustable
 Line density: L/M/H/UH
 Persistence
 Horizontal Scale
 L/R flip and U/D flip
 Rotation
 TSI: General/muscle/fluid/fat
 Gray Map
 Tint map

THI and PSH

Available on all types of transducer
 Patent PSH technology, obtains purer harmonic, better contrast resolution, higher S/N ratio, exceptional high frequency harmonic
 iClear available
 Image quality: HPen/HGen/HRes (HPen/ HPen-Gen/HGen/HRes for phased array)

M-mode

Display formats: V2:3, V3:2, V 3:1, H2:3, FULL (V: vertical, H: horizontal)
 Color M-mode available
 Acoustic output power
 Dynamic range
 Gain
 M sweep speeds
 M soften
 Tint map
 Gray Map
 Edge enhancement

Free Xros M (option)

Display formats: V2:3, V3:2, V 3:1, H2:3, FULL (V: vertical, H: horizontal)
 Color Free Xros M available
 Up to 3 lines
 Sweep speeds
 M Tint map
 Gray Map

Free Xros CM (option)

Only available in TDI mode
 Display formats: V2:3, V3:2, V 3:1, H2:3, (V: vertical, H: horizontal)
 Acoustic output power
 Gain
 Sweep speeds
 Tint map
 Gray Map
 Edit, undo, delete function for curved line

Color Doppler Imaging

Dual live
 HR Flow: High Resolution Flow provides better image quality and flow sensitivity
 Image quality: Pen/Gen/Res
 Max velocity
 Steer
 Acoustic output power
 Gain
 ROI size/position: Adjustable
 Scale
 Baseline
 Wall filter
 PRF
 Packet size
 Flow state: L/M/H
 Smooth
 B/C align: On/Off
 Priority

Color map
 Invert: On/Off
 Persistence
 Velocity tag: On/Off
 Line density: L/M/H/UH

Power Doppler Imaging

Dual live: Side by side displays B and B+PDI
 HR Flow: High Resolution Flow provides better image quality and sensitivity

Support directional power doppler
 Image quality: Pen/Gen/Res
 Acoustic output power
 Dynamic range
 Gain
 ROI size/position: Adjustable
 Steer
 Scale
 Wall filter
 PRF
 Packet size
 Flow state: L/M/H
 Smooth
 B/C align
 Priority
 Color map
 Directional color map
 Persistence
 Line density: L/M/H/UH

PW/CW-Mode

Display formats: V2:3, V3:2, V 3:1, H2:3, FULL, Duplex/Triplex (PW only) (V: vertical, H: horizontal)
 Image quality: Pen/Gen/Res
 PW velocity
 CW velocity
 Sample volume size
 Sample gate depth: Adjustable
 Scale
 Baseline
 PW Steer
 Volume
 PW PRF
 Gain
 Dynamic range
 Sweep speed
 Wall filter
 Invert
 Auto invert
 Angle correction
 Quick angle
 Gray map
 Tint map
 Time/frequency resolution
 Auto calc
 Auto calc cycle
 Trace area

Performance Specifications

Imaging Parameters (cont'd)

Tissue Velocity/Energy Imaging (included in TDI option)

Available on phased array transducer

- Dual live
- PRF
- Acoustic output power
- Gain
- Dynamic range
- ROI size/position: Adjustable
- Scale
- Baseline
- Wall filter
- Packet size
- Tissue state: L/M/H
- Smooth
- B/C align
- Priority
- Color map
- Invert
- Persistence
- Velocity tag
- Line density: L/M/H/UH

Tissue Velocity Doppler (included in TDI option)

Available on phased array transducer

- Display formats: V2:3, V3:2, V 3:1, H2:3, FULL, Duplex/Triplex (V: vertical, H: horizontal)
- Sample volume size
- Sample gate depth: Adjustable
- Scale
- Baseline
- Volume
- PRF
- Gain
- Dynamic range
- Sweep speed
- Wall filter
- Invert
- Auto invert
- Angle correction
- Quick angle
- Gray map
- Tint map
- Time/frequency resolution

Tissue Velocity Motion (included in TDI option)

- Display formats: V2:3, V3:2, V 3:1, H2:3, FULL (V: vertical, H: horizontal)
- Acoustic output power
- Dynamic range
- Gain
- M sweep speeds
- M soften
- Gray Map
- Edge enhancement

Smart 3D (option)

Smart 3D

- iClear
- VR: On/Off, select volume rendered image
- MPR: On/Off, select A, B and C plane
- Display formats: MPR only/asymmetric
- VOI: On/Off
- Reset: All, orientation, reset curve
- Active quadrant: A, B, C, VR
- VR orientation
- Inversion
- Accept VOI: On/Off
- Flip: Flip VR
- Sync: Synchronize VR with selected plane
- Render modes: Surface, Min, Max, X-ray
- View direction: Down/up, left/right, front/back
- Threshold
- Opacity
- Smooth
- Brightness
- Contrast
- Tint
- Auto rotation
- Edit:

4D (option)

Available on all volume transducers

Static 3D and 4D

- iClear
- VR: On/Off, select volume rendered image
- MPR: On/Off, select A, B and C plane
- Display formats: MPR only/asymmetric
- VOI: On/Off
- Reset: All, orientation, reset curve
- Active quadrant: A, B, C, VR
- VR orientation
- Inversion: On/Off
- Accept VOI: On/Off
- Flip: Flip VR
- Sync: Synchronize VR with selected plane
- Render modes: Surface, Min, Max, X-ray
- View direction: Down/up, left/right, front/back
- Threshold: (Only on VR)
- Opacity: (Only on VR)
- Smooth
- Brightness
- Contrast
- Tint

Auto rotation

Edit:

iScape View (Panoramic Imaging, option)

Available on all transducers

- Acquisition method: B
- Supports speed indicator
- Actual size: On/Off
- Fit size: On/Off
- Ruler: On/Off
- Tint map
- Rotation

Zoom

- Zoom: Spot zoom and read zoom
- iZoom

QSave

- Quick save image parameter setting after image adjustment done
- Support Save, Save as, Restore

TDI QA (option)

- Dedicated quantification tool for TDI velocity, strain and strain rate analysis
- Freehand ROI: Manually deploy ROI on the cine
- Up to 8 ROIs
- Delete all
- Delete current
- ROI tracking: Track ROI to compensate myocardial movement
- Std. Height
- Std. Width
- Std. Angle
- Export: Export current data as CSV format file

iNeedle (option)

- Needle visualization enhancement
- Available on all linear transducers
- Needle steer

Cine Review and Raw Data Processing

Cine review

- Available in all modes
- Frame by frame manual cineloop review or auto playback with variable speed
- Independent cine review in 2D Dual and Quad mode one by one
- Retrospective and prospective storage are available and length is pre-settable
- Frame compare: displays one cine in dual format and allows frame by frame compare side by side
- Cine compare: compare cines which are saved in same imaging mode
- Jump to first and jump to last: one stroke go to first or last frame in the cine

Raw data processing

- B-mode: iClear, zoom, TGC, LGC, gain, dynamic range, gray map, tint map, flip, rotation
- M-mode: Speed dynamic range, gain, gray map, tint map, edge enhancement
- Color: gain invert smooth baseline color map priority velocity tag
- PW: baseline wall filter speed angle correction quick angle invert dynamic range gray map tint map

Performance Specifications

Measurement/Analysis and Report*

Generic measurements

2D-mode

Depth
Distance
Area: Ellipse, Trace, Spline, Cross
Trace Length
Double Distance
Parallel
Volume: 3-Distance, Ellipse, Ellipse + Distance)
Length Ratio
Area Ratio
IMT
B Histogram
B Profile
Volume Flow
Color Velocity

M-mode

Distance
Time
Slope
Heart Rate
Velocity

Doppler mode

D Velocity
Time
Heart Rate
Acceleration
D Trace
PS/ED
Volume Flow

Automatic Doppler Spectrum Analysis

Heart cycle pre-settable (1, 2, 3, 4, 5)
Automatic real-time and retrospective tracing
User configurable display of items
Support PI, RI, TAMAX, TAMEAN, Volume Flow calculations
Appropriate factory setting according to applications

Clinical option measurement package

Abdominal

Liver
Common Hepatic Duct
Portal Vein Diameter
Gall Bladder: Length, Height, Wall Thickness
Common Bile Duct
Pancreas: Head, Body, Tail, Duct
Spleen
Left/Right Kidney: Length, Width, Height, Volume, Cortical Thickness
Left/Right Adrenal Gland: Length, Width, Height
Abdominal Aorta Diameter
Abdominal Aorta Bifurcate Diameter
Iliac Diameter
Bladder: Length, Width, Height, Volume, micturition volume
Common Hepatic Artery
Hepatic Artery
Portal Vein, Main Portal Vein

Hepatic Vein, Left Hepatic Vein, Middle Hepatic Vein, Right Hepatic Vein
Splenic Artery
Splenic Vein
Left/Right Renal Artery, Main Renal Artery, Renal Artery Origin, Arcuate Artery, Segmental Artery, Interlobar Artery, Renal Vein
Abdominal Aorta
Celiac Axis
Superior Mesenteric Artery
Inferior Vena Cava
Superior Mesenteric Vein

Gynecology

Cervix: Length, Width, Width
Uterus: Length, Width, Height, Volume, Uterus body, Endometrium Thickness
UT-L/CX-L
Ovary: Length, Width, Height, Volume
Follicle: Length, Width, Height, Average Diameter, Volume

Obstetrics

Early OB: GS, YS, CRL, BPD, FL, NT, Amniotic Fluid
2nd- 3rd Trimester: BPD, HC, OFD, FL, AC, AF, NF, PL Thickness, TAD, APAD, TCD, Cisterna Magna, HW, OOD, IOD, Orbit, HUM, Ulna, RAD, Tibia, FIB, CLAV, Vertebrae, MP, Foot, Ear, APTD, TTD, FTA, THD, HrtC, TC, Umb VD, F-Kidney, Mat Kidney, Cervix L
Fetal Heart: LVIDd, LVIDs, LV Diam, LA Diam, RVIDd, RVIDs, RV Diam, RA Diam, IVSd, IVSs, IVS, LV Area, RV Area, RA Area, Ao Diam, MPA Diam, LVOT Diam, RVOT Diam

Gestational Age
Fetal Growth
Fetal Trend Graph
Estimated Fetal Weight
Multi-gestational Calculations
Fetal Biophysical Profile
User definable OB tables
Z-score

Cardiology

LV Function: Teichholz, Cube, Gibson, Simpson Single-plane, Simpson Bi-plane, Modified Simpson, Bullet, S-P Ellipse, B-P Ellipse
LV Mass: Area-Length Method, Truncated-Ellipsoid Method, Cube Method
Atrial Volume: LA Vol(A-L), LA Vol(Simpson), RA Vol(Simpson)
LVIMP
LV TEI, RV TEI
Qp/Qs
PISA MR, AR, TR, PR
MVA(VTI), AVA(VTI)
MV medial/lateral (TDI)

Urology

Prostate: Length, Width, Height, Volume
PPSA, PSAD
Ureter Diameter
Bladder: Length, Width, Height, Volume, micturition volume
Left/Right Kidney: Length, Width, Height, Volume, Cortical Thickness
Left/Right Adrenal Gland: Length, Width, Height
Left/Right Testis: Length, Width, Height
Left/Right Seminal Vesicle: Length, Width, Height

Vascular

Carotid: CCA, ECA, ICA, Bulb, Vert A, Subclav A
Upper Extremity Artery: Subclav A, Axill A, Brachial A, Radial A, Ulnar A, Innom A
Upper Extremity Vein: Cephalic V, Basilic V, Ulnar V, Radial V
Lower Extremity Artery: CFA, SFA, Pop A, TP Trunk A, Peroneal A, P.Tib A, A.Tib A, Dors. Ped A
Lower Extremity Vein: C.Iliac V, Ex.Iliac V, Femoral V, Saph V, Pop V, TP Trunk V, Sural V, Soleal V, Peroneal V, P.Tib V, A.Tib V
TCD (Transcranial Doppler): ACA, MCA, PCA, Basilar, A Comb.A, P Comb.A, Vertebral A, Basilar A

Small Parts

Thyroid: Length, Height, Width, Volume
Isthmus: Height
Testis: Length, Height, Width
Mass: Length, Height, Width, Nip, Distance, Skin Distance
Superior Thyroid Artery
Inferior Thyroid Artery

Orthopedics

Hip
d/D

IMT

Intima-Media Thickness measurement
Automatic detection of IMT when ROI is set
Support CCA, ICA, ECA, Bulb IMT
Near wall and far wall detection
Angle selectable

Smart OB

Auto measurement for OB, a special tool for easy OB scan, and greatly reduce time and increase productivity
Support BPD, HC, OFD, FL, AC
Initiating AC should input GA first
Measurement result can be modified by user

Report

Specific report template to the application
Editable value in report
Images are selectable
Support anatomical graphics in vascular reports
Titles are pre-settable in setup
User configurable templates
Export as PDF/RTF format

Performance Specifications

Measurement/Analysis and Report* (cont'd)

* Not all measurements are listed in this part; For more detailed information please refer to User Manual

Exam Storage and Management

Exam storage

1TB hard drive
Capable of storage up to approximately 113,664 single frames
Direct digital storage of single frame and cine 2D, color and Doppler.

Exam management

iStation workstation dedicated for patient exam management
Patient exam query/retrieve
Support review of current and past exam
New exam, Active exam, Continue exam functions, End exam are available
Support measurements and calculations on archived exam and images
Export images as BMP/JPG/TIFF/DCM/AVI format
Support backup/send to USB devices, DVD-RW media

iWorks (option)

Auto workflow protocol
Templates are user configurable
Functions: pause, stop, replace, repeat, skip, insert single step, return and continue, steps in thumbnail, iNsert another template
iWorks setup mode: B/Dual/B+Color/B+ PW/ B+Color+PW/B+CW/B+Color+CW/ B+M
iWorks setup annotation: support up to 2 annotations, location and font size are configurable.
iWorks setup bodymark: select existing library, and probe indicator is pre-settable
iWorks setup measurement: select existing measurement library

Connectivity

Ethernet Network Connection

USB serial data output (need a converter cable)

DICOM 3.0 basic (option)

Verify (SCU, SCP)
Print
Store
Storage Commitment
Media Exchange

DICOM Worklist (option)

DICOM Query/Retrieve (option)

DICOM Modality Performed Procedure Step - MPPS (option)

DICOM OB/GYN structure report (option)

DICOM Cardiac structure report (option)

DICOM Vascular structure report (option)

DICOM Breast Report (option)

Transducers

Curved array

C5-2E

Application: Adult Abdomen, Pediatric Abdomen, OB/GYN, Vascular, Nerve
Bandwidth: 2.1 – 5.1MHz(-6dB); 1.5 – 5.6MHz(-20dB)
Number of Elements: 128
Convex Radius: 51mm
B-mode Frequencies: 1.3 – 3.2, 1.9 – 4.6, 2.3 – 5.7MHz
Harmonic Frequencies: 4.0, 5.0, 6.0MHz
Doppler Frequencies: 2.0, 2.5, 3.0MHz
Biopsy Guide: available, multi angle, reusable

C7-3E

Application: OB/GYN, Adult Abdomen, Pediatric Abdomen, Vascular
Bandwidth: 2.8 – 7.1MHz(-6dB); 2.2 – 8.1MHz(-20dB)
Number of Elements: 192
Convex Radius: 51 mm
B-mode Frequencies: 2.6 – 4.8, 3.6 – 6.4, 3.6 – 7.2MHz
Harmonic Frequencies: 5.5, 6.0, 6.5MHz
Doppler Frequencies: 3.0, 3.3, 3.6MHz
Biopsy Guide: Available, multi angle, reusable (not in SFDA)

V11-3E

Application: OB/GYN, Urology
Bandwidth: 4 – 10MHz(-6dB); 3 – 11.2MHz(-20dB)
Number of Elements: 128
Convex Radius: 12mm
B-mode Frequencies: 2.6 – 6.5, 3.2 – 7.9, 4.7 – 12.8MHz
Harmonic Frequencies: 7.0, 8.0, 9.0MHz
Doppler Frequencies: 4.4, 5.0, 5.7MHz
Biopsy Guide: available, single angle, reusable

Volume curved array

D6-2E

Application: OB/GYN, Abdomen
Bandwidth: 2.1 – 5.4MHz(-6dB); 1.4 – 6.4MHz(-20dB)
Number of Elements: 128
Convex Radius: 41mm
Volume Sweep Radius: 19mm
B-mode Frequencies: 2.6 – 4.8, 3.6 – 6.4, 3.8 – 8.2MHz
Harmonic Frequencies: 5.5, 6.0, 6.5MHz
Doppler Frequencies: 2.5, 3.0, 4.0MHz
Biopsy Guide: Not available

Linear array

L12-3E

Application: Small parts, Vascular, Musculoskeletal, Nerve, Pediatrics
Bandwidth: 4.2 – 11.8MHz(-6dB); 3 – 13MHz(-20dB)
Number of Elements: 192
Steered Angle: +/-6°,12°(B); +/-10°, 20° (C, PW)
B-mode Frequencies: 4.4 – 9.6, 5.4 – 11.5, 6.6 – 13.5MHz
Harmonic Frequencies: 8.0, 9.0, 10.0MHz
Doppler Frequencies: 4.4, 5.0, 5.7MHz

Biopsy Guide: Available, multi angle, reusable

L14-6NE

Application: Small parts, Vascular, Musculoskeletal, Nerve, Pediatrics, Neonatal Head
Bandwidth: 5.1 – 12.5MHz(-6dB); 3.5 – 16MHz(-20dB)
Number of Elements: 192
Field of View (max): 38mm
Steered Angle: +/-6°,12°(B); +/-10°, 20° (C, PW)
B-mode Frequencies: 5.4 – 11.6, 6.0 – 12.6, 6.6 – 13.5MHz
Harmonic Frequencies: 8.0, 10.0, 12.0MHz
Doppler Frequencies: 5.0, 5.7, 6.6MHz
Biopsy Guide: Available, multi angle, reusable

L14-6WE

Application: Small parts, Vascular, Musculoskeletal, Nerve, Pediatrics
Bandwidth: 5.1 – 12.5MHz(-6dB); 3.5 – 16MHz(-20dB)
Number of Elements: 256
Field of View (max): 50mm
Steered Angle: +/-6°,12°(B); +/-10°, 20° (C, PW)
B-mode Frequencies: 4.8 – 10.6, 5.4 – 11.6, 6.6 – 13.5MHz
Harmonic Frequencies: 8.0, 10.0, 12.0MHz
Doppler Frequencies: 5.0, 5.7, 6.6MHz
Biopsy Guide: Available, multi angle, reusable

Phased array

P4-2E

Application: Adult cardiac, Pediatric Cardiac, TCD, Adult Abdomen
Bandwidth: 1.7 – 4.1 MHz(-6dB); 1.3 – 4.7 MHz(-20dB)
Number of Elements: 64
Field of View (max): 90°
B-mode Frequencies: 1.3 – 3.2, 1.6 – 3.8, 2.2 – 5.4 MHz
Harmonic Frequencies: 3.4, 3.6, 3.8, 4.2 MHz
Doppler Frequencies: 2.0, 2.3, 2.5 MHz; TDI 3.0, 3.8MHz
CW Frequency: 2.0MHz
Biopsy Guide: Available, multi angle, reusable

Performance Specifications

Peripheral Devices and Accessories (Option)

Black/white digital video printer

SONY UP-D897, MITSUBISHI P93DC

Black/white analog video printer

SONY UP-897MD, MITSUBISHI P93W-Z

Color digital printer

SONY UP-D23MD, SONY UP-D25MD

Color analog printer

SONY UP-20, MITSUBISHI CP910E

Graph/text printer

HP Officejet J3600, HP Officejet6000, HP Color LaserJet CM1015 MFP, HP Deskjet1280, Epson office 85ND

Wireless printer

HPOTOSMART PLUS e-ALL-IN-ONE B 210a

Built-in DVR

Built-in digital video recorder, save space and is a useful tool for education and memory
Max storage length each time: 30 min

Gel warmer

Enables gel warming
Easily be disassembled off system for cleaning
Temperature: 25°C ± 3°C
Light indicator for temperature protecting
Switch: On/Off
Dimension: 77.8mm (W) × 79mm (D) × 151.4mm (H)
Weight: approx. 380g

Footswitch

USB port: 971-SWNOM (2-pedal)
USB port: SP-997-350 (3-pedal)
Support User-definable functions (Freeze, Save, Print)

ECG

6-pin, AHA/IEC, for 3-lead wires
ECG wave display: On/Off
Gain
Sweep speed

PCG

PCG wave display: On/Off
Gain
Smooth

Barcode reader

Laser barcode scanner
Model: SYMBOL LS2208

Built-in Wireless adapter

Encryption: WEP, WPA-PSK, WPA2-PSK
Max transfer speed
Protocols: 802.11b: 11, 5.5, 2, 1 Mbps;
802.11g: 54, 48, 36, 24, 18, 12,
9, 6 Mbps; 802011n: up to 300 Mbps

Built-in Battery

Model: LI231002A
Replaceable and rechargeable lithium battery
Support switching into standby mode when exterior power is intermitted
Full battery lasts more than 24h in standby mode
Light indicator for standby mode
Empty battery recharged to full in less than 8h

System Inputs and Outputs

Video/Audio input

Video in
S-Video in
Audio in
Microphone

Video/Audio output

Video out
S-Video out
HDMI
VGA out
DVI
Audio out

Physio input

Support ECG/PCG signal
ECG
PCG

Other input/output

USB
Ethernet
Remote
RS-232 port

Safety and Conformance

Quality standards

ISO 9001
ISO 13485

Design standards

CSA C22.2 No. 601-1
EN 60601-1 and IEC 60601-1
EN 60601-1-2 and IEC 60601-1-2
EN 60601-1-6 and IEC 60601-1-6
EN 60601-2-37 and IEC60601-2-37
EN 62304 and IEC 62304
EN 62366 and IEC 62366
EN ISO 17664 and ISO 17664

CE declaration

DC-8 system is fully in conformance with the Council Directive 93/42/EEC Concerning Medical Devices. The number adjacent to the CE marking (0123) is the code of the EU-notified body that certified meeting the requirements of Annex II excluding (4). of the Directive